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SUBMISSION TO

THE ROYAL COMMISSION ON  
ELECTRIC POWER PLANNING

DEBATE STAGE HEARINGS

PART VI  
THE DECISION-MAKING  
FRAMEWORK  
AND PUBLIC PARTICIPATION

December 1978



Ontario

Ministry  
of the  
Environment

The Honourable  
Harry C. Parrott, D.D.S.,  
Minister

Graham W. S. Scott,  
Deputy Minister



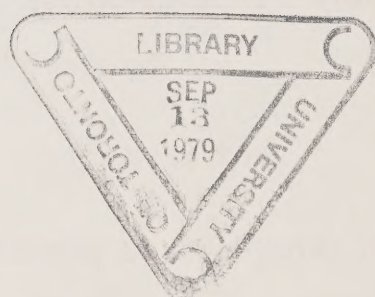
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## PROLOGUE

The curtain rises from the stage, and discloses a scene in the jungle. It appears vast, trackless and almost impenetrable. On all sides stand gloomy trees, their boughs overhanging and intertwined, with ivy clinging and dangling from their branches. Noises off indicate the presence of all sorts of weird and mysterious creatures, crashing and clashing in the undergrowth. Now and then some animal scurries across the foreground, swings expertly from tree to tree, or stops to stick its tongue out at the audience.

Enter Prince Valiant, following the Quest of the Shining Grail. He is wearing bright armour and riding a white charger. He finds his way strangely impeded. Brushwood and undergrowth tear off pieces of his armour, his horse stumbles, tumbles, bumbles, fumbles, mumbles and grumbles over tree roots which seem suddenly to appear. For no particular reason that he can see, he is bitten by a snake. At another point he comes across a ladder; where will this particular ladder take him?

He must find his way through the jungle; he searches for a path; he looks for the best ladders. He notes all the most important landmarks and obstacles, and tries to avoid the snakes - they do not seem to like him. (Actually, the snakes have nothing against him personally; it's just the way snakes are!).

But things go wrong. Landmarks seem to change their position from minute to minute. Obstacles which were in one place mysteriously re-appear in another! His horse trips over the foot of a ladder sticking out of the undergrowth, and he pitches off, head first into a snake pit.

Poor man! Is there a way out of this impossible situation? Could the "benevolent boa constrictor" help? Or is he perhaps riding his own white charger?



## I INTRODUCTION

### 1. Scope of Paper

This paper sets out the Ministry of the Environment's views on how decisions for electric power planning should be made, and the role of public participation in that process.

The paper begins with a statement, distilled from the argument set out in the paper, of the problem which we feel the Royal Commission on Electric Power Planning (RCEPP) must address.

The main body of the paper sketches in the background of social uncertainty within which Ontario Hydro must operate and, based upon Hydro's literature and statements, describes Hydro's response to the problems caused by this uncertainty. This is followed by a critique of Hydro's proposals to deal with them, and the Ministry of the Environment's own interpretation of the problem.

The paper continues with suggestions for solutions to some of the problems of electric power planning, and concludes with some ideas for restructured electrical policy mechanisms for the Royal Commission to consider.

2. Two Views of the Issue:

People have differing views as to what constitute effective decision-making and public participation processes for electrical power planning. These views depend upon the role attributed to the various actors in the process, and what these processes are supposed to do. '

To a utility such as Ontario Hydro with the mandate to produce and implement electrical power programs, an effective process may be seen as one which leads to an efficient approval of the utility's programs and projects. Government decision-making and public participation processes may be seen as an adjunct to the utility's own internal decision-making. The main problem with such government decision-making and public participation processes may therefore be seen as simply an inability to produce quick approvals of the proposals put forward to them; which can be remedied by changes in the government's approvals process. The Royal Commission's role would then be perceived as one of recommending a process or processes better able to meet this objective.

The Ministry takes the position that inefficiencies in Government approvals processes are only part of the problem facing electric power planning today, and probably a small part. Some streamlining of approvals is undoubtedly possible, and this matter is addressed later in this paper.

We think that the main problem which the Royal Commission should address is that of devising overall decision-making processes which are more in tune with the climate of uncertainty, and the diversity of objectives within society which continue to evolve. The programs resulting from such improved processes stand a better chance of being implemented with a minimum of controversy. The focus of attention should be both on the internal decision-making processes of the utility, and on the government bodies that must provide the utility with the policy framework within which it can develop its programs. The role of the general public within this broadened decision-making process is crucial.

This paper develops several key principles which should guide both "constructive tinkering" with the existing process, and further restructuring for the "Post Porter" era.



## II BACKGROUND

### 1. Today's Social Situation: "The Age of Uncertainty"

Ontario Hydro's policy planning must be seen against the background of today's society, which is both complex and complicated. It is, indeed, these attributes of modern society which are at the root of Hydro's difficulties in planning - difficulties which are, of course, far from confined to Hydro, but are shared with the rest of society.

A combination of both traditional and new concerns has changed the context within which planning must take place, and forced all the actors to re-examine their acts. Society has always contained competing and sometimes conflicting elements; of late, these have become more numerous and explicit, with increasingly powerful demands on available resources, whether environmental or financial.

The chief result has been a climate of uncertainty, alluded to by J.K. Galbraith in his term "The Age of Uncertainty." (1) This uncertainty, or "turbulence", (2) has made long-term planning very difficult, particularly for organizations such as Ontario Hydro, which attempt to look far into the future. New factors must now be incorporated into the decision process; can the existing decision-making framework handle this? We discuss below some of the elements which contribute to the present situation.

- An important element of the new social "climate" is the development of what may be described as "environmental consciousness". There has been an increased awareness of the importance of the relationship between mankind and the environment, and the quality of that environment. (3) This awareness of environmental factors applies not only to the natural aspects of the environment - "the birds, the trees and the fishes" - but also to those aspects that directly concern people themselves: their jobs, their homes, their relationships with other people, their social status and perceptions.
- Perceptions of impending environmental and energy crises have meant that energy conservation has been increasingly recognized as an alternative to energy supply. Government, industry, special interest groups and the general public have shown increased interest in renewable energy resources.
- A widespread feeling by members of the public of being shut out even from decisions which affect them directly, has led to a re-evaluation of existing processes and procedures, and a demand for public participation in broad areas of decision-making. (4)

- The market mechanism, for long regarded as the arbiter of choice, has been increasingly seen to be unable adequately to take account of new social factors and environmental "costs". (5)

We propose now to examine how society has responded to the climate of uncertainty, and in the next Section, how Hydro has responded.

## 2. Society's Response

The increasing complexity of modern society, and the enormous scale of its operations, have resulted in a situation where the previously existing planning and decision mechanisms have not proved equal to the task.

Society's response has been in the direction of increased regulatory activity, of adapting or amending existing institutions and mechanisms or procedures, and of developing new ones. These, in their turn, act upon, react to, and adapt to, one another.

In the nature of things, attempted solutions have been in many cases of the temporary or ad hoc variety; in relation to Ontario Hydro, these have included the Solandt Commission, the ad hoc hearings of the Environmental Assessment Board on a portion of the Bradley to Georgetown transmission line, Task Force Hydro, special hearings of the

Ontario Energy Board, and the Select Committee of the Legislature looking into Hydro Affairs.

As time passed, the need for wider measures became apparent. In Ontario, the Committee on Government Productivity (COGP) was set up in 1969, and many of its key recommendations were accepted and implemented, including the establishment of new ministries and their grouping into Policy Fields. Coming closer to home, as part of that same re-organization, 1972 saw the creation of the Ministry of the Environment, to unify previously separate environmental agencies. At the same time, environmental assessment was being developed by the Ministry of the Environment as one response to the new context, intended to bring about an integrated consideration by all affected government agencies and by the public, of the potentially significant environmental effects of a proposed project and its alternatives.

Indeed, the creation of the Ministry of the Environment, and the Royal Commission on Electric Power Planning (RCEPP), were both part of the same government response to the need to look at problems in a wider context, and provide a more comprehensive basis on which to make decisions.

Turning specifically to electric power planning since the early 1970's, a clear trend is visible: the greater integration of electric power planning with energy planning in general, and a greater degree of policy guidance from the

government. The Ministry of Energy, in its Submission to the RCEPP Information Hearings in 1976, summarized these developments as follows:

"From the outset, the Ministry has been developing its appreciation of the importance of electric power in overall energy policy and of the significance of Ontario Hydro and other Ministry agencies both as the sources of input on policy development, and as instruments for policy implementation." (6)

The advent of new government agencies, together with shifting jurisdictional boundaries, have further contributed to the climate of uncertainty within which decision-makers have now to operate.

### 3. Ontario Hydro's Situation

The supply of electric power in Ontario has continued to grow over the last 70 years. What might be termed a "love affair" developed between demand and supply. Continuing gains in demand were to be met automatically by gains in supply.

The need for generating capacity and other electrical facilities was traditionally determined by considering the forecast electrical load, and the degree of reserve capacity regarded as necessary for reliable service. (7) The situation is elaborated upon in the Ministry of the Environment's submission to the RCEPP entitled Electrical

Generation and Energy Use, June 1977, (p 29 ). The submission goes on to note that "newly-emerging circumstances require substantial modifications in the traditional approach" since it "does not take environmental concerns into account sufficiently early in the process".

The traditional approach described above, when linked with the idea of economy of scale, and based upon purely technical and financial considerations, resulted in the design of very large generating facilities. It provided the incentive and support for the CANDU program, and a rationale for projecting an electric power program involving a network of large transmission lines and generating stations, both fossil and nuclear. Their enormous size and complexity required great amounts of money, man-power, time and other resources. This drove those responsible for electric power planning to seek ever larger and ever longer term commitments. (8)

The uncertainty which characterizes the present situation does not fit well with the large-scale and long-term commitments implicit in Ontario Hydro's program.

Some of the problems which Ontario Hydro has been facing, and which contribute to that uncertainty are:

- public hostility and opposition to Hydro's projects;
- opposition of other government agencies to Hydro's proposals because of their effects on those agencies' interests;
- the "new awareness", which has led to environmental and socio-economic constraints;
- approvals and process delays, with sometimes conflicting approvals procedures under different legislations;
- jurisdictional entanglements, especially between Federal and Provincial governments;
- long "lead times" for building facilities, which require long term commitments;
- difficulties in long-term forecasting of electrical demand; in recent years the load forecasts have begun to depart significantly from the trends characteristic of the pre-1970's era, upon which Hydro's long term demand assumptions have been based. Hydro's traditional criteria for reliability have also been subject to increasing challenge from various sectors of society, including the Select Committee of the Legislature investigating Ontario Hydro (9);

- financial constraints and economic difficulties due to the high capital cost of electrical facilities. Uncertainties regarding the availability of debt financing were emphasized in 1976 by the imposition of borrowing limits upon Hydro by the Treasurer of Ontario;
- a possible inability to maintain commitments to a program over the period necessary to implement it because of changing ideas of what constitutes an acceptable program. (10)

While electric power planning is becoming generally recognized as a crucial factor in the general long term planning scene, the growing interest in it, often in the form of opposition, is usually the result of the actual implementation of the program, rather than a factor which arises during the formulation of the program. This is natural, since even when the public is allowed to participate at program formulation stage, greater interest is aroused when "real live projects" are actually in the offing. The public are then in a far better position to contemplate the potential effects of the proposals.

Once interest has been aroused, it often transfers itself to wider planning issues, as evidenced by past experience with electric transmission lines from Nanticoke to Pickering, Lennox to Oshawa, and Bradley to Georgetown. A

more general understanding of the environmental implications of expanding the electric power system has influenced even people who have had no direct contact with the siting of facilities.



### III ONTARIO HYDRO'S RESPONSE: "FIXING" THE UNCERTAINTY

#### 1. Introduction

An organization with practical long-term aims, such as Ontario Hydro, will quite understandably attempt to lessen the areas of uncertainty which affect its long term planning.

Milan Nastich, Executive Vice-President of Planning and Administration, Ontario Hydro, stated in evidence to the RCEPP:

"One of the factors which a utility has to face is that its time constant, to use Dr. Porter's term, is fairly long ...

I think it is important, at some stage, that we set a direction and a pattern and recognize, within limits, that it cannot be varied too much without heavy cost.

I recognize something the utility business has not accepted in the past, that uncertainty is about as high in the utility business as it has been in any business and will continue to be so." (11)

Obviously, many of the matters which militate against the smooth implementation of Ontario Hydro's capital works program are outside its direct control. Regarding others, however, Hydro seems perhaps to feel that something may be done to avoid delay: perhaps some components of the scene may after all be "fixed" in advance. This appears to be the motivation behind Hydro's proposals for the reduction of "lead time", including streamlining of approvals processes, and such concepts as "site-banking", two-stage environmental

assessment, etc., or for seeking other types of long-term commitments such as the arrangement with the uranium mining companies at Elliot Lake.

2. The "Lead Time" Problem as Described by Ontario Hydro

Ontario Hydro and the electrical and nuclear industries have focused a great deal of critical public attention on the question of the "lead time" required to take an electrical power facility from the point of conception through to the actual in-service date, and the problems this causes to utility planners. The culprit? Almost invariably, the finger of blame has been pointed toward public participation, and the review and approvals processes which growing concern have prompted Governments to put into place.

Consider the remarks of Robert Taylor, Ontario Hydro's Chairman. Speaking to the Symposia on Ontario's Electric Future, November 19, 1976, sponsored by the Royal Commission on Electric Power Planning, he compared the existing public participation and approvals process to a game of snakes and ladders in which "the snakes outnumber and out-stretch the ladders". And what is needed to "shrink those snakes down to size" and give Hydro some ladders out of the snake pit?:

"I refer to the need to bring some order to the tangle of environmental approvals, planning acts, expropriation acts, government boards, select committees, and yes, Royal Commissions in which we find ourselves". (12)

In the same vein, we hear the Canadian Electrical Association in its Submission to the Commission entitled, Lead Times and Approval Processes Facing Canadian Electrical Utilities:

"Among Canadian Electrical Utilities, Ontario Hydro has the longest lead time for obtaining approvals to construct. This is mainly due to the legislative requirement for studies and hearings under several Acts, including The Environmental Assessment Act, The Expropriation Act and The Planning Act and the requirement for public involvement in these studies."(13)

(This is a curious statement in light of the fact that The Environmental Assessment Act has not yet been followed for any major generating or transmission facility of Ontario Hydro).

To Ontario Hydro, then, "lead time" is one of the most crucial problems facing the utility at the present time. (14)

As mentioned earlier, a number of concepts have been developed by Hydro as the means of reducing the "lead time" problem. We set out below, for discussion, a description of "lead time" and of some of these concepts, either quoted from Hydro sources, or based upon the Ministry's contacts with Hydro. Our views on "lead time", and as to the appropriateness or otherwise of these concepts, are set out in Section IV of this Paper.

### 3. Hydro's Definition of Lead Time

"Lead time" means different things to different people. On page 52 of Ontario Hydro's May 1976 Memorandum to the Royal Commission, entitled Generation Planning Processes, "lead time" is described as "the time required in order to bring a new facility into commercial service." While, according to this definition, the point at which "lead time" ends may easily be agreed upon, it is difficult to pinpoint the beginning of this period.

On page 53 of the same Memorandum, typical "lead times" for major new thermal electric generating stations in Ontario are set out. In the case of a nuclear generating station, with 850 Mw units, this is broken down as follows:

1.	Investigations and public participation culminating in approval to acquire a specific site	2 to 3 yrs
2.	Specific site investigations, public participation and preliminary engineering culminating in project release	3 yrs
3.	Site preparation	1 to 3 yrs
4.	Detailed design and on-site construction up to in-service date of first generating unit	5½ yrs
TOTAL:		11½ to 14½ yrs

(Note: The numbers 1 to 4 on the margin have been added here).

We would call attention to a few features of this table:

- The process as set out in the table falls naturally into two main parts, namely: that comprising points 1 and 2, culminating in "project release" (5 to 6 years), and that comprising points 3 and 4, dealing with the period when work is taking place on the site ( $6\frac{1}{2}$  to  $8\frac{1}{2}$  years). The basic difference between these two parts is that once "project release" has taken place, it is a question of "all systems go": the project is abuilding.
- The first two points deal with the formative planning stage, which contains elements of uncertainty, such as public participation, and government approvals. What are the factors which prompt the beginning of this stage?
- "Investigations" are shown as coming before "approval to acquire a site", while "specific site investigations" are shown after this point, but prior to "project release". Presumably, the role of "investigations" would be aimed at establishing the acceptability of a particular piece of land for particular types of facilities, and "specific site investigations" would provide the information necessary for preliminary engineering.

- "Approval to acquire a specific site": the type of approval is not mentioned, but it should be noted that approval under The Environmental Assessment Act is required for such acquisition.
  
- Public participation appears in both points 1 and 2 of the table. Mr. Taylor, Chairman of Hydro, said on the subject of public participation:

"The concept of public participation is to seek out the public's views from the early stages of planning for new facilities before firm decisions are made." (15)

"... difficult to deal with, and yet perhaps of over-riding importance, are the ever-growing public concerns about the environmental, economic and social consequences of system expansion plans, the review processes which these concerns have spawned, and the effects of the processes on scheduling, costs, and the general effectiveness of our planning and construction programs." (16)

These two quotations reveal different views on the role of public participation in the review and approval processes. In the first instance, it appears that public reactions are recognized as legitimate responses to real concerns about the system expansion plans. In the second instance, frustration is expressed with Hydro's inability to proceed on schedule with those same plans about which people are so concerned.

Let us now examine some proposals that have been made by Ontario Hydro for shortening the "lead time".

#### 4. Site and Land Banking

"Site banking", that is, the acquisition of sites for generating stations and transmission lines well in advance of their being utilized, has been suggested by Hydro and others as a solution to the "lead time" problem. It is worthwhile quoting in full the following extract from Mr. Taylor's "Snakes and Ladders" speech, as it sets out the subject very clearly.

"In the meantime, we are building - or in some cases rebuilding - some ladders of our own. The Royal Commission has already previewed one of them, which for simplicity's sake is referred to as a 'land banking scheme'. It is designed to find a way around the long and growing lead times that we face in planning for new generating and transmission facilities.

This is not a new idea around Hydro - in fact, it was used back in the early 1960's when we acquired about half a dozen sites on which major generating plants have just recently been started or are nearing completion. The practice allowed Hydro to acquire sites and hold them in readiness for development as the need for specific new generating stations arose. This provided flexibility as to the location of each station when the time for it arrived.

It worked very well - except that we did not, unfortunately, acquire the associated transmission routes at the same time - and was considered something of a innovation in the utility business. Land banking makes just as much sense today and I think I can say without any hesitation that Hydro wants to continue making use of it today, taking into consideration all those new concerns being expressed by the public.

Hydro has been grappling with the problem of long lead times (which has grown out of these concerns) for some time now, with a view to getting more of the public participation and approval steps running in parallel instead of in sequence. This idea has now been coupled with a new version of the old land banking scheme and preliminary study suggests that together they could reduce lead times for generating stations and associated transmission lines by from two to four years.

The basis of the new land banking idea was outlined at the Commission's Generation Planning Hearing last July by a Hydro witness panel. Essentially it means that we would get the early part of the approval process for two or three station sites and line routes in hand, so that on fairly short notice we could go ahead quickly with the remaining steps of obtaining approval for specific projects.

But banking will certainly never again be as simple as it was 15 years ago, and the achievement of any reduction in lead times rests on two very important assumptions. The first is that Hydro is able to conduct investigations and public participation processes to identify the needed sites and to receive approval from the Environmental Assessment Board to purchase the sites and their associated transmission line routes on the basis of expected need some years into the future. The second is that Hydro is prepared to make significant investments in engineering and environmental studies and the purchase of property once approval is received to acquire the sites" (emphasis added). (17)

The ideas set out in this quotation will be commented on in Section IV of this paper, but at this point a few queries come to mind:

- what were the criteria which "allowed Hydro to acquire sites and hold them in readiness for development" 15 years ago?
- what is the rationale for "getting more of the public participation and approval steps running in parallel instead of in sequence"? What does this say about the role and nature of public participation?

- what does the mention of "significant investments in engineering and environmental studies ... once approval is received to acquire the sites" say about the role of environmental factors in the acquisition of such sites? (emphasis added).
- is there any difference between "site banking" and "land-banking"?

"Site-banking" involves establishing, well in advance of building, that particular types of facilities will be acceptable at specific locations; building is to take place at an unspecified future time. It should be noted that if one of the criteria for the acceptability of such sites is that of allowing for an orderly implementation of a certain system plan, the approval of a number of such sites and transmission line routes would probably be tantamount to approval of the system plan.

## 5. "Existing" Sites

Over the past two years, Ontario Hydro has been considering the use of existing generating station sites, already owned by Ontario Hydro, to accommodate additional generating capacity. It would appear that excess acreage available at Chats Falls, Lennox, Wesleyville and Darlington is being regarded by Hydro as constituting a site or land bank, waiting in readiness for whenever the "need" for

specific new generating stations arises. It seems that alternative sites are not being considered in the eastern portion of the province.

We have had no indication that any of these properties have been properly assessed as possible locations for additional generating facilities in spite of Hydro's knowing for some three years that The Environmental Assessment Act requires it. The Ministry is still unclear as to whether Ontario Hydro considers that properties at these locations constitute sites for generating stations, or are simply pieces of land which have yet to be shown to be sites for new stations. Judging by our recent contacts with Hydro, it seems that the former is the case, i.e. that point 1 of the "lead time" shown on Hydro's Generation Planning Processes table (see page 20) is regarded either as having been fulfilled or something which can be ignored because of the original Orders-in-Council that authorized purchase of the site.

Approvals to construct new generating stations on those properties have never been requested, or granted, under The Environmental Assessment Act, nor have there been any exemptions granted in this regard for the properties, other than those granted to generating stations already under construction or in operation.

At the time that these sites were first approved, what types of generating stations were envisioned? On what grounds was each site approved? Examination of the Orders-in-Council by which the purchase of these properties was approved makes it clear that, in the case of the Chats Falls property, it was approved as a site for a hydro-electric facility. It goes without saying that the nuclear generating station which is being suggested as a possibility for this site could not even have been conceived of in 1925, 1930 and 1931 when the Orders were made. (18) As far as the other three sites are concerned, the Orders-in-Council are not specific as to the facilities to be constructed on the properties, nor is it apparent from these Orders what reviews were done of the properties to determine their acceptability as locations for particular types of facilities. (19)

## 6. Two-Stage Approvals

Hydro has developed certain two-stage approval concepts for generating stations and transmission corridors. The concepts are designed to fit with Ontario Hydro's planning procedures. The First Stage application for project approval would involve an earlier, more general, stage of Ontario Hydro's planning, while the Second Stage would involve a later, more specific stage.

Two-stage approvals have been the subject of discussions between the Ministry of the Environment and Ontario Hydro, but it should be emphasized that any such

procedures have been developed by Hydro for its own benefit. From the Ministry's point of view, it is possible for any proponent to submit as many environmental assessments (under the Act) for an undertaking as desired, provided that the requirements of The Environmental Assessment Act are fulfilled and the intent of the Act is not compromised. It is Hydro's own responsibility to make the environmental assessments conform to those requirements.

The Ministry is uncertain at this time as to what exact form Hydro is proposing for the two-stage approvals concept, which appears to have been evolving over the past couple of years. From the description in Hydro's Report 573SP, Planning of the Ontario Hydro System, Part 1 of Volume 1 (1976), it appears that what was contemplated in the First Stage was an approval under The Environmental Assessment Act for some sort of overall plan. This involved the establishment in principle of the general locations of transmission lines and generating stations, the ultimate number of lines to be provided and the ultimate station capacity and types to be provided. The Second Stage of the study, for which a further environmental assessment approval would be requested, would concentrate on geographical areas approved in the First Stage, and select the actual site for the facility. (20)

A more recent version of two-stage approval is contained within the "Draft Environmental Assessment" for an energy centre site on the North Channel. This still has not been formally submitted to the Minister of the Environment

for review under The Environmental Assessment Act. It appears that a First Stage application for approval under The Environmental Assessment Act would be for the acquisition of a site for 12,000 Mw generating facilities and a heavy water plant, and for associated transmission "bands". The Second Stage, for which a further approval under The Environmental Assessment Act would be requested, would deal with the details of the design of the plant at that site. It does not look as if the previous approval under The Environmental Assessment Act of a general plan into which that generating station would fit (as appears to be the case with the earlier version of the two-stage approvals concept), would be requested. Therefore, it would be necessary for Hydro to address the system planning issues which provide a substantial portion of the rationale for the undertaking, in its First Stage submission.

The link between Hydro's latest concept of two-stage approvals, and those of the land banking of new and "existing" sites, appears to us to be as follows. A First Stage EA would establish the acceptability of a piece of land as the site for particular types of facilities; after site purchase was approved, the site would go into the "bank". The Second Stage presumably would simply involve the design of the facility on that site, at such time as it were decided to build it.

In the case of the next two generating stations proposed for the East System after Darlington, Hydro took the position in 1976 that, due to urgency, there was insufficient time to go through its First Stage approval process for new sites. Hydro, therefore, proposed to limit itself to existing sites, eliminating the environmental assessment for the First Stage, and proceeding straight to the environmental assessment for the Second Stage. Ministry staff responded by pointing out that if Hydro intended to limit itself to "existing" sites based on assumptions about the length of "lead times" and necessary in-service dates, these arguments should be included as part of the rationale for the alternatives.

Another variation of this is the two-stage approval process set out in recent Ontario Hydro publications. (21) This process also involves a First Stage government approval for the acquisition of the generating station site and "transmission bands", and a Second Stage government approval for the detailed design and development of these facilities. However, approval under The Environmental Assessment Act is shown only as applying to the Second Stage; the type of First Stage approval envisioned is not specified.

It must be emphasized again that the various concepts set out above are ones which Hydro itself has developed; they have not been accepted by the Ministry of the Environment, nor by the government. Section IV, which follows, sets out the Ministry's views on "lead time" and the other concepts described above.

#### IV THE MINISTRY OF THE ENVIRONMENT'S VIEW OF HYDRO'S RESPONSE

##### 1. Introduction

This Section is devoted to a discussion and critique of Hydro's views as set out in the previous Section. Hydro's concept of "lead time" is addressed first, after which those of site and land-banking, making use of "existing" generating sites, and two-stage approvals, are dealt with. At the same time, the idea of "need" and the role of public participation, are also discussed.

##### 2. Three Categories Within "Lead Time"

The previous Section of this paper presented Hydro's table setting out its view of the constituents of "lead time" (page 20). It was suggested that it fell naturally into two halves, the first culminating in "project release"; and the second concerned with actual construction work on the site. It was pointed out that public participation was mentioned in both Sections 1 and 2 of the table. Public participation and government approvals processes are seen as part of "lead time".

Earlier, we said that "lead time" means different things to different people. Analyzing the time period which appears to comprise Hydro's description of "lead time" (quoted on page 20), we can divide the actions which take place during "lead time" into three categories:

- i) matters which result from Ontario Hydro's own choices and are thus within its control, for instance, Hydro's choice of a particular technology;
- ii) matters where other government agencies, such as the Ministry of the Environment, can help, for instance, by "greasing the wheels" of regulatory processes; and
- iii) matters where the public is involved in the course of general public participation processes, in the political process, or within the confines of an approval process (such as public hearings under The Environmental Assessment Act). These are more unpredictable as to outcome.

With regard to i), Ontario Hydro can itself monitor and try to abbreviate the time spent on matters such as: arriving at systems planning decisions, comparing alternative sites, arranging finance, acquiring a site, carrying out specific site investigations, making detailed designs, ordering equipment and constructing a facility. All these matters would come under the heading of normal planning, design, construction and pre-operation time requirements. In addition, Hydro can avoid loss of time by such measures as carrying out, where appropriate, studies and activities in parallel rather than in series, arranging consultation

with regulatory agencies far enough in advance to avoid having to remedy deficiencies in applications, trying to avoid changes of mind leading to postponement of approvals applications, and perhaps even by taking some reasonable risks, such as carrying out preliminary work on post-approvals stages prior to actual receipt of the approval, where all indications are that approval is likely.

With regard to ii), "greasing the wheels" of the regulatory process is discussed in Section VI of this paper under the description of "streamlining".

With regard to iii), the "public" component of planning, whether as part of the normal public participation process, or as the public hearing component of the regulatory process, is not easily controlled, or susceptible to streamlining. It is this "public" component of the decision-making process which expresses to planners and decision-makers the "uncertainty" of today's society to which we referred earlier. Yet through this component may be found a way of tackling that very uncertainty. Attempts at rigidly controlling, or pressuring, this component will indeed destroy its usefulness.

In dealing with iii), it is important to clarify two issues which are interconnected and dependent on one another, namely "need" and public participation.

### 3. The "Need" for Power

RCEPP Issue Paper No. 8 asks, "on what basis should 'need' be determined"? (22) "Need" cannot be considered separately from the building of the facilities required to satisfy that "need"; those facilities will affect both "natural" and "human" aspects of the environment. The following quotation, from this Ministry's General Guidelines for the Preparation of Environmental Assessments, July 1978 (attached as Appendix A of this Submission) sets out the argument (in relation to environmental assessment):

"One could only answer the question, in advance of an environmental assessment, as to whether a particular project were "needed", if many basic assumptions or decisions had already been made. Yet many of these basic assumptions will themselves be matters for discussion and resolution through the environmental assessment process, since environmental effects (broadly defined) - and "costs" - are the inevitable result of any undertaking. The "need" for an undertaking cannot be established without taking into account the consequences of the action which is being suggested. (emphasis added here).

"Need" is a relative term, and therefore the question as to whether an undertaking is "needed" is also a relative one: it depends upon certain assumptions, and who is making them. In other words, if certain assumptions are taken as given, then a particular course of action may be "needed".

As a simple example, if one wished today to go from Toronto to Montreal in one hour, one would need to take an airplane (i.e. no other means would suffice). The point is that the "need" for a plane is dependent on there being only one hour available for the journey. However, if there were half a day in which to make the journey, several other alternatives might also be possible. There is also an implicit assumption that one is willing - and able - to pay the "cost" (financial, environmental and other) of such a journey" (p. 20; emphasis added here).

The traditional approach to electric power planning assumes that the amount of electrical power required is a given. Yet once the consequences and costs of building the electrical facilities are examined, it could well be that the "need" for them may be called into question, e.g. perhaps they will be too expensive, or the social disruption be too great.

Electric power supply does not exist in a vacuum; it is society's servant, one tool among all the others that society uses to achieve its goals. Once the consequences of providing a given amount of electric power have been made apparent, the "need" for it may be weighed up and compared with all the other "needs" of society, before a decision is made. The very activity of providing for a forecast load, (i.e. building bulk power facilities), and the effects of providing for that load, may themselves ultimately modify the demand for electricity.

The idea of an a priori and immutable "need" for electricity, to be determined on technical grounds, is behind the frustration felt by many of those directly involved in electric power planning or with an interest in taking part in the growth of electrical power, with what they see as unwarranted outside interference with the program. The program is in fact entirely logical and rational, but only if the a priori assumption is made.

Such an a priori approach leads to an attitude that regards approvals requirements as hurdles over which an obviously desirable proposal must unfortunately jump, rather than as mechanisms for testing whether the proposal is indeed desirable. This attitude fosters uncertainty by stiffening opposition.

#### 4. "Need" and The Environmental Assessment Act

We should clarify the question of "need" under The Environmental Assessment Act, since it is the subject of differing views. (23)

Section 5(3) of The Environmental Assessment Act requires the proponent of an undertaking to provide a statement of the "purpose" and the "rationale" for the undertaking. The Act itself does not contain the term "need", although the term "justification of need" is used in the regulation prescribing the mandatory content of the Summary to an environmental assessment. An underlying principle of The Environmental Assessment Act is that the ability of a project to meet the proponent's purpose is not in itself an adequate rationale for an undertaking. The intent of The Environmental Assessment Act is to allow for the weighing of the advantages of meeting the proponent's purpose against the disadvantages of doing so. The striking of a favourable balance between the advantages and the disadvantages will constitute the "need" for the project.

Thus, a discrepancy between a forecast demand and a forecast supply is only one factor to be taken into account in the determination of "need".

Further discussion on this point is provided in Appendix A, General Guidelines for the Preparation of Environmental Assessments, (see especially pp 19-21 and pp 23-24).

Naturally, these requirements also apply to Ontario Hydro projects designated as undertakings under the Act. Clearly, if the overall rationale for a project has been adequately established and agreed to in the planning, there should be little difficulty in meeting the requirements of The Environmental Assessment Act. Similarly, if the planning process prior to the submission of the environmental assessment has reflected the concerns of the public at large, the public acceptability of the rationale for the project will have been well established, should a hearing be required. This brings us to the subject of the role played by public participation in the planning and decision-making process, with which we shall now deal.

## 5. Public Participation

The Royal Commission's Interim Report on Nuclear Power in Ontario indicates that the Commission endorses the value of public participation. (24) The Ministry of the Environ-

ment supports this view, and we therefore feel that we can limit our comments on the subject to a few observations. The provisions for public hearings under The Environmental Assessment Act, The Environmental Protection Act, and The Ontario Water Resources Act, represent a legislative commitment to public participation in the planning and decision-making process.

The public's role in this decision-making process is an essential one, and rests on two major concerns: that of gathering adequate information, and the political one of the legitimacy of the decision.

Perhaps the most crucial aspect of any planning process is the gathering of relevant information upon which a decision can be made. Public participation may help proponents identify previously unknown information, and supply data on public goals, attitudes and values. It may highlight, early in the process, areas of public concern, and thus avoid later confrontations and consequent delay. The public may also be able to suggest further alternatives.

On the "political" side, public participation fits in with the democratic basis of our society. E.F. Schumacher's dictum was, "Planning is inseparable from power." (25) For planning to have any meaning, it must lead to decisions based upon it which are capable of being carried out. It is one thing to make decisions; it is quite another to make

them "stick". In order to be effective, decisions must be realistically based; that is, they must have the support and commitment - or at least avoid the opposition - of those who are in a position to influence the implementation of those decisions. Therefore, the decision-makers must ask themselves who such people are. Suffice it to say that the number of people who see themselves as having a legitimate interest in public policy decisions is growing, and these interests are becoming more divergent. Public participation is one mechanism by which those interests may be taken into account.

To be sure, the electoral process has traditionally served this purpose. In the last decade, however, the pace of social change has become too rapid for the electoral process to comprise a complete response. Consequently, we have seen universal demands that the traditional methods be supplemented by more direct public involvement in the planning and decision-making process.

We stated above that "need" is a relative term, dependent upon the consequences of the action being proposed, which should be weighed up and compared with all the other "needs" of society before a decision is made. This means that the social element plays an important part in the decision. Public participation is part of the process of determining what the effects and implications of alternative

courses of action are likely to be. It is therefore a necessary part of the process by which "need" is debated and a decision on "go" or "no-go" is reached.

6. Conclusions on "Lead Time"

Let us now turn once more to Hydro's definition of "lead time", and the discussion at the beginning of this Section of the paper. As Hydro defines it, "lead time" for a nuclear generating station is about  $11\frac{1}{2}$  to  $14\frac{1}{2}$  years. The biggest "problem" area for Hydro is that resulting from the desire of society for verification that the facilities are indeed "needed", (refer to iii) on page 32). Perhaps the problem for Hydro is not so much the length of the "lead time" in itself, for Hydro does not seem to regard eight years or more construction period for a large generating station as a problem. Rather, the problem seems to be uncertainty as to how long the portion of the "lead time" that involves public and government approval will actually last. While this is a problem for Ontario Hydro in view of the long-term commitments required for the facilities, it is less certain that society as a whole, (rightly or wrongly), sees it as a problem for itself.

In evidence before the Royal Commission, Milan Nastich, Executive Vice-President of Ontario Hydro, referred to Ontario Hydro as a "trustee" charged with the responsibility of providing for Ontario's electrical requirements. (26)

However, due to the implications of the electrical power program, and its requirements for long term and large scale commitments, society appears to have set limits to this trust. It must first be established that the future facility, as set out in plans, is acceptable to society ("needed"), before the "green light" can be given; this takes time.

In such circumstances, there are two basic options. One is to limit society's participation and tell society to accept on trust Hydro's analysis of the situation. But is it likely that such an attitude could or should be enforced these days, while staying within the bounds of our democratic principles? The other option is that of keeping several alternative courses of action alive ("concurrent multi-level planning", see page 55). In the event that one particular alternative is not found acceptable, there are alternatives available.

Having addressed the "lead time" question in general, we now turn to a critique of Hydro's proposals for reducing "lead time".

7. Critique of Site and Land Banking, "Existing" Sites and Two-Stage Approvals

(1) Preliminary Note

Hydro's proposals for site and/or land banking, including making use of "existing" generating station sites,

and two-stage approvals, were described in Section IV. Our proposals for the "streamlining" of regulatory processes are presented in Section VI.

"Site-banking", in Hydro's view, involves the approval of sites for facilities which will be built at some unspecified, and probably rather distant, time. When required, they can be "taken from the shelf", "dusted off", and developed. As noted earlier, there seems to be little, if any, differentiation made by Hydro between "site-banking" and "land-banking". It is obviously inconceivable to suggest that the term "land-banking" could be used for a situation in which Hydro would go out and indiscriminately purchase land without any previous evaluation of its possibilities, in the hope that it might be of some value or other to Hydro in the future! For the purposes of this argument, therefore, we are treating the terms as describing essentially the same thing, since it is clear that some preliminary investigations would be done by Hydro, and that the land is being acquired for some purpose.

The idea of "site-banking" has also been applied by Hydro to the proposed use of "existing" generating station sites for new facilities; presumably the term could also be applied to the First Stage of a two-stage approval process, where a significant period of time elapsed between the First and Second stages.

The description of two-stage approvals in Section IV of this paper contains two versions: an earlier ("old-style") version described by Hydro in 1976 and a newer ("new-style") version proposed for the North Channel energy centre. Both versions appear to envisage separate environmental assessment applications being made at each Stage. The "latest" variation of the "new-style" two-stage approval, described in Provincial Generation Siting Review, for example, (27) shows The Environmental Assessment Act as applying only to the Second Stage approval; the type of First Stage approval is not specified nor described.

As mentioned earlier, the various forms of two-stage approvals concepts have been developed by Ontario Hydro alone, as being suited to its own planning processes. The Ministry of the Environment takes the position that a proponent may seek a "staged" approval so long as the intent of The Environmental Assessment Act is not compromised. However, apart from the "old style" two-stage EA, other examples of the staged approval concept so far examined by the Ministry do not appear to conform to the intent of the Act (see below).

#### (ii) Two Main Criticisms

Two main objections apply to these concepts. The objections have to do with that same "uncertainty" in today's society referred to earlier, and the desirability of preserving as long as possible in the planning process, the

capability of being able to make a free comparison of alternative courses of action. Some examples will best explain what is meant.

The concept of "site banking" may be used to illustrate the objection based upon "uncertainty". Even if acceptable environmental studies had been carried out before approval to buy the site was obtained, there would unfortunately still be a major stumbling block to such a scheme: that of "uncertainty". In making a decision to proceed with the construction and operation of a large generating station, the community is being asked to take a "long view" of the appropriateness of that action. Say that, in addition, the site is then "banked" for ten years before a decision is made to develop it, this "long view" is pushed further into the future. Yet the "uncertainty" of the situation within society suggests that, as new information is disseminated, new technologies appear, etc., different attitudes and values will develop and have their effect on what actions are considered appropriate, including those regarding the use of a "banked" site.

In such circumstances, the present "problem" with "lead time" may in fact be exacerbated. The reason for this is that, when the time for implementation arrives, it is not likely that the government or Hydro could foreclose on a public discussion of the system expansion program, by referring to earlier government approvals for the

acquisition of sites for generating stations, and transmission routes. In order for "site-banking" to be successful, therefore, it would have to be incorporated into an on-going planning process, including the principles outlined in Section VI and public participation, where previous decisions would be subject to periodic re-evaluation. The danger of "off-the-shelf" site banking is that it may simply give the illusion of certainty, where none in fact exists.

The second argument, regarding the free comparison of alternatives, is particularly applicable to Hydro's two-stage approval concepts. The detailed environmental studies, and decisions regarding the acceptability of sites, are left to a late stage in the planning process; but the public is implicitly asked to accept the site at the initial stage. The following discussion would apply particularly to "new style" and "latest" two-stage approvals processes, as well as to "existing" generating station sites. The question to be answered is: what could be the objection to detailed environmental studies to establish the acceptability of the site being carried out only at the Second Stage of the process? After all, it can be argued that if the site, through these studies, does prove to be unacceptable, it need not be used. This is, in fact, only true if other alternatives are equally available when the decision is being made, and if one accepts that a public agency such as Hydro will hold a site for a long time and then simply "drop" it.

The basic problem lies with "real-life" considerations. The interests of good planning demand that, when alternative courses of action are compared, all reasonable alternatives be freely available at a stage when as many options as possible are still open. This idea is also central to the concept of environmental assessment. Were approval given to the purchase - or use - of a site at a stage when significant information had not yet been collected, freedom of choice of the alternatives would be substantially compromised. By then the build-up of significant commitments to a particular Hydro program would be very difficult to disregard, when basic decisions on site acceptability came to be made.

The effect might be, therefore, that important issues related to the "need" for the proposal would effectively be removed from the public arena. This might well lead to the "need" for the facility being challenged at a later stage, via avenues outside the formal approvals process - whether political or legal. Such a challenge would then be likely to cause much greater uncertainty regarding the final outcome of the proposal, than would the early commitment by Ontario Hydro to a formal process, such as environmental assessment, which would allow all of the relevant issues to be openly discussed from the beginning culminating in one approval (or disapproval).

(iii) Further Comments on Two-Stage Approvals  
and "Existing" Generating Station Sites

We wish to clarify further the Ministry's position on two-stage approvals and "existing" sites. Our understanding of Hydro's "new-style" two-stage EA indicates that the studies culminating in the First Stage environmental assessment would not contain what we consider to be adequate information on which the acceptability of the site could be determined. We do not know what the First Stage studies would consist of in Hydro's "latest" "two-stage" concept. In any case, if the First Stage did not include an approval under The Environmental Assessment Act, the process would not comply with the requirements of that Act.

The evaluation and comparison of all reasonable alternatives in terms of their effects on the environment in its broad sense, forms one of the bases upon which the acceptability of a site can be established. Studies should include social considerations and public participation. Where such potentially significant effects as those likely to be caused by a large generating station are concerned, more detailed investigations are particularly important. (As an aside, it should be noted that, if such First Stage Studies were adequate for this purpose, a second application under The Environmental Assessment Act would not be likely to be necessary, since the matters could then be dealt with, as with other industrial applications, under The Environmental Protection Act and The Ontario Water Resources Act.

(This would call into question the usefulness of the "new-style" two-stage EA concept, as it appears at present constituted, under The Environmental Assessment Act; or, it would represent a clear statement by Hydro that The Environmental Assessment Act must not apply to it).

With regard to "existing sites", Hydro has been proposing that the studies in point 1 on the "lead time" table (page 20) need not be done, (perhaps in view of the urgency of the situation), since the site is already in Hydro's hands. While it is true that the sites were approved at their respective time for generating stations, the criteria by which the sites were judged acceptable related to the actual use for which the sites were intended. They were certainly not consonant with the extended and/or different uses, such as the large "energy centres", which Hydro has now suggested. The government has not yet considered even the validity of the concept of "energy centres".

"Existing" sites do not have any particular status under The Environmental Assessment Act, except as some of the possible alternative locations for an undertaking. The subject of alternatives is enlarged upon in Appendix A (General Guidelines for the Preparation of Environmental Assessments, pp 21-23). It is pointed out there that the Act requires the examination not only of "alternative methods of carrying out the undertaking" (such as locations

of different types of generating stations within the same category), but also "alternatives to the undertaking" (such as different technologies). The proponent is required to settle upon one preferred alternative by the end of the process, and put that forward as the undertaking.

The "real-life" considerations mentioned earlier, whereby the freedom of choice of alternatives may be compromised, would apply to the "new-style" two-stage EA, use of "existing" sites, and presumably also to the "latest" two-stage approvals concept. They are also one of the reasons why the purchase of land in advance of environmental assessment is generally prohibited under The Environmental Assessment Act; land acquisition is indeed the first step of development for an agency such as Hydro.

On the other hand, the "old-style" version of two-stage environmental assessment could be a workable plan with regard to The Environmental Assessment Act, if the First Stage application under The Environmental Assessment Act would be made for the system plan and the Second Stage would be made for the site approval. It would be necessary to ensure that both Stages contained adequate information to satisfy the Act, and were open to feedback, iteration, and re-evaluation not only within themselves but from one stage to the other. This would ensure that the First Stage in particular would not be "fixed", but would be open to modification as time went on, and circumstances changed. The

idea is further discussed in Section VII, "After RCEPP", where a comprehensive policy development and approvals framework for electrical power planning is discussed, in which flexibility is one of the most important factors.

(iv) Conclusions

Hydro's concepts for reducing the "lead time" of "site" or "land-banking", "existing" generating station sites and two-stage approvals, are open to serious question in terms of the "uncertainty" of today's society, and of preserving the free comparison of alternative courses of action. In addition, it would be difficult, and in some circumstances impossible, for them to comply with the requirements of The Environmental Assessment Act.

8. General Conclusions

A fundamental problem of planning electric power programs is that the "uncertainties", which are a reflection of the basic social, economic and political realities today, are not susceptible to long-term "fixing". Treating the symptoms will not eliminate the problem and may indeed in some circumstances actually make it worse, by diverting attention from important issues.

Understandably, Hydro's system planners wish to maximize certainty; but the public interest also demands

that it be possible for new evidence and ideas to be introduced and debated as time goes on, if they appear significantly to alter the rationale for previous decisions.

Hydro has to reconcile the planning of a large electric power system, with the ability and willingness of those "publics" which are in a position to influence the program of implementation of that system, to commit themselves to the program. This reconciliation must occur in the context of a changed - and continually changing - social situation, the future evolution of which cannot be ascertained with any certainty.

What is required are planning and decision-making processes that recognize and accept the lack of certainty and go on from that point.



## V TOWARDS SOME SOLUTIONS: GUIDING PRINCIPLES

### 1. Key Principles in Planning for an Uncertain Future

In view of the basic uncertainties of society discussed earlier in this paper, how should planning be approached?

An analysis of the planning problems arising from the changes which have occurred in Ontario society, which parallel the changes in most of the industrialized countries, leads us to suggest that three key principles ("the three graces") are essential to any planning and decision-making process. They are: flexibility, holism, and participation.

Flexibility is necessary in order to allow maximum scope for assessing and re-assessing alternative courses of action. By this means, policy is kept current and able to adjust to changing circumstances, so that assumptions may be reconsidered. Several options may thus be considered at the same time. The process must be sufficiently flexible for quite different types of decisions. The process should provide for the possibility of iteration (i.e. going back to previous stages of the planning process, and repeating or updating the process of analysis) whenever issues are raised of such significance that earlier assumptions must be reviewed. Paradoxically, the process should provide some certainty that previous decisions will not be overturned at later stages unless significant new factors arise.

Holism (or comprehensiveness) recognizes that the world is an indivisible whole, with all the parts relating to, and affecting, one another. Planning and decision-making processes must cover all logical steps in the planning of the project, and see that all relevant factors are taken into account at each step. A process which does not address an important step in the planning process or which fails to consider certain types of potential effects (e.g., social or environmental implications) of a given step, would not meet this requirement. A holistic approach will allow the comparison and evaluation of different types of effects, e.g. between the effects of a proposal on the natural environment, and the effects on people, thus avoiding errors of omission. Holism is a natural complement to flexibility.

Participation allows all sectors of society, whether government, business interests, or the public at large, to take part in the formation of policy which will, after all, affect them all. It allows the involvement and commitment of all those who have the power to influence, and/or make decisions. The public must be able to participate at each stage of the planning process. It is possible that different "publics" will participate at different stages. Public participation is discussed more fully above, in Section IV. Appropriate participation is the key to providing some degree of certainty that decisions will not be overturned.

## 2. Additional Concepts

In addition to the "three key principles", two ancillary principles will help achieve a more effective policy and approvals system. These are the "end-use" perspective on energy planning, and the idea of "concurrent multi-level planning".

The "end-use" approach to planning is described in some detail in the Ministry's Submission to the Debate Stage (Final) Hearings of the Royal Commission, entitled Electrical Generation and Energy Use. It involves looking at the uses to which various forms of energy can be put, and trying to make a rational match between a particular requirement for energy, say low-grade heat, and the type of energy source which is most suitable to fulfill that requirement. This compares with the traditional, "supply-oriented" approach to energy planning discussed earlier in this paper. The "end-use" approach also allows for early identification of conservation opportunities. Its chief advantage is to help generate technical alternatives for examination, thus contributing to flexibility. A mechanism for evaluating these alternatives is still a necessity.

The idea of "concurrent multi-level planning" emphasizes the value of simultaneously planning for different alternatives at different planning levels. For example, the kind of overall energy planning framework which would

incorporate the "three key principles", would also continuously be examining conservation, solar water- and space-heating, methanol production, etc., as alternatives to electricity. Alternatives would be examined at that level of planning most relevant to their application; in some instances at the local level, in other instances at the provincial level. These processes would be incorporated into the type of policy making and approvals mechanism described in Section VII. "Concurrent multi-level planning", therefore, assists flexibility and participation.

Moving from energy planning to the narrower context of electric power planning, "concurrent multi-level planning" implies that the government, and Ontario Hydro, should not have to put "all its eggs in one basket." The planning and approvals processes, by their very nature, may result in a decision to implement a particular type of project different from that envisioned by Hydro. At the same time, therefore, Hydro should be keeping alive other types of solutions, consistent with its mandate and expertise. Similarly, other elements of society, both government and private, should be entrusted with the fostering of other alternatives.

3. The Example of the Bradley to Georgetown  
Transmission Line

The Bradley to Georgetown project provides a revealing case study for the Royal Commission to examine, in order to identify some of the problems to which a lack of application of the "three key principles" contributed.

The root cause of the difficulties was a systems planning process (which we understand Hydro has now modified as a result of this experience) which located and constructed generation capability without ensuring that transmission egress would be in place when required. As a result, Hydro's system planners were under very tight deadlines to have the transmission routes approved before the generation capacity came on stream. Perhaps because of these time pressures, Hydro failed to seek public input at an early enough stage in the planning of the Bradley to Georgetown line. Furthermore, when the consultation began, the citizens involved perceived an attempt by Hydro to exclude from the debate basic issues, such as system planning options. As a result, citizens were not satisfied with the adequacy of Hydro's planning and public participation process and used all available legal means to raise the issues they felt must be addressed.

The Bradley to Georgetown experience makes it clear that citizens will be dissatisfied with any process which does not provide an adequate opportunity for them to review a proposed project and advance their views at a stage when alternatives, including the alternative of not proceeding, remain open. Had The Environmental Assessment Act, which incorporates the "three key principles", existed at the time when the main body of the project was undertaken, it is likely that Hydro's difficulties would have been less severe.

#### 4. Conclusion

Decision-making processes should be designed in such a way as to help avoid the barriers to decision-making caused by the climate of uncertainty and by multiple and conflicting objectives within society, by establishing an agreed-upon mechanism. In such a mechanism, all the information on which the decision would be based should be freely available to all sides, so that discussion could take place on the basis of a common set of data, and any trade-offs be made in public. The mechanism would incorporate the "three key principles" of flexibility, holism and participation, as well as the additional concepts of the "end-use" and "concurrent multi-level planning" approaches.

## VI THE EXISTING APPROVALS PROCESSES: "CONSTRUCTIVE TINKERING"

### 1. Introduction

This Section deals with some improvements which can be made in the operation of existing approvals processes, and in particular in streamlining the working relationships between The Environmental Assessment Act and other significant Acts with which Ontario Hydro must deal. It therefore begins with a short exposition of the role of The Environmental Assessment Act.

### 2. The Environmental Assessment Act in Perspective

The Environmental Assessment Act is the latest and most comprehensive in the series of Ontario statutes dealing with "environmental" problems, under which Ontario Hydro must seek approval for its projects. Other Ontario statutes in the environmental field are The Ontario Water Resources Act, The Environmental Protection Act and The Pesticides Act; they are all administered by the Ministry of the Environment. Among statutes administered by other Ontario Government agencies, the most significant at present are, as far as Ontario Hydro is concerned, The Planning Act and The Expropriations Act.

The Environmental Assessment Act was specifically developed to operate within the context of the changing

social environment described earlier in this paper, and to respond to the new planning and decision requirements. Environmental assessment allows environmental considerations to be inserted into decision-making in the same way, and as early in the process, as technical and financial considerations were in the past.

In terms of the "three key principles" discussed earlier, the principle of flexibility is reflected in the environmental assessment process by the requirement that all factors relevant to the decision be fed into the process at an early stage, when flexibility is still possible. The principle of holism is fulfilled by the definition of the environment to include not only its "natural" but also its "human" elements and their interrelationships. In addition, feedback and iteration within the process allow the continual re-assessment of information and alternatives.

The Act allows for formal public hearings to be held for undertakings submitted. During the planning process that culminates in the preparation of an environmental assessment document, the proponent is strongly advised to involve the public, even though public participation at this stage of the process is not a formal legal requirement of the Act. Public participation can be of great assistance to the proponent in preparing the environmental assessment document, and in facilitating its passage through the review process and public hearings (if requested) of the Environmental Assessment Board.

A Public Record for each undertaking, consisting of the environmental assessment, the review of that document, and the written submissions and decisions of the Environmental Assessment Board, must be available for public inspection. Any person may make a written submission to the Minister of the Environment regarding an environmental assessment and its review, and may require a public hearing by the Environmental Assessment Board. Basically, these provisions encourage public involvement in hearings and maximum access to information once the environmental assessment has been submitted to the Ministry. It should also be noted that the mandatory government review that is carried out under the Act is valuable to the various interested "publics", in that it organizes the relevant issues pertaining to an undertaking, and may assist them in formulating their positions on the issues. Since such "publics" may have limited funds, such assistance can promote greater and more informed public involvement.

Appendix A, General Guidelines for the Preparation of Environmental Assessments, gives further information on The Environmental Assessment Act and process. With regard to its current site selection program for generating stations, Hydro's attention is drawn to the remarks regarding "alternatives" on pages 21 to 23:

"Some alternatives will be examined in less detail than others ... all this will be reflected in the degree of detail with which the alternatives are described. The Ministry of the Environment does not encourage proponents to carry alternatives to subsequent stages of the study once reasonable grounds for discarding them have been identified."

Together, The Environmental Assessment Act, The Ontario Water Resources Act and The Environmental Protection Act form a comprehensive and integrated package. Once the requirements of The Environmental Assessment Act have been met, the more detailed technical provisions of the other two Acts come into play (for a fuller account see this Ministry's Submission to the RCEPP Public Information Hearings, May 1976).

3. The Environmental Assessment Act and Ontario Hydro

The Environmental Assessment Act was designed as an appropriate mechanism for dealing with the review and approval of major undertakings with potential environmental effects of provincial significance. While the Act is generally applicable, the objective of using it as the major decision-making mechanism for Ontario Hydro undertakings was, as the record shows, a major factor leading to the government's decision to introduce the legislation. For instance, in his statement in June, 1972, announcing the appointment of the Solandt Commission to inquire into the proposed Nanticoke to Pickering transmission line, Premier Davis indicated that his government was looking toward the establishment of more permanent environmental review mechanisms.

The idea of environmental assessment as a means to deal with large-scale energy undertakings is also clear in the

1973 Throne Speech announcing the government's intention to introduce the legislation:

"My government has already acted in relation to specific matters involving potential and significant environmental considerations, such as the Solandt Commission on the proposed Nanticoke-Pickering hydro line and the Task Force to study the potential of the lignite fuel deposits in Northern Ontario.

In the knowledge that similar matters will arise in the future which will require intensive and expert study and analysis, my government will place before you legislation to establish a permanent agency for environmental protection having the responsibility for a comprehensive system of assessment and evaluation of the environmental significance of activities of the Ministries of the government, utilities, projects funded in part by the government and related activities in the private sector which have comparable environmental implications."

In all of the discussions leading up to passage of the Act, including the Green Paper on Environmental Assessment, (28) and the debates in the Legislature, Ontario Hydro undertakings figured prominently as examples of the types of undertakings to which the Act should apply. The Regulation and Exemption Orders approved by Cabinet when the Act came into force on October 20, 1976, indicate the Government's commitment that the Act be applied to major Ontario Hydro undertakings in the future.

In his "Snakes and Ladders" speech referred to earlier, Mr. Taylor recognized The Environmental Assessment Act's potential for streamlining:

"Ideally, the procedure set out by The Environmental Assessment Act should achieve a number of things. It should satisfy reasonable citizens that a project is acceptable in environmental terms; it should answer any specific questions raised by a project; it should examine all reasonable alternatives; and it should result in a firm - and prompt - decision." (29)

(It should be observed, however, that having said this, he quickly hedged his bets:

"The danger is that instead of consolidating the whole procedure as we know it into a more workable time frame, the Act may be allowed to throw yet another snake on to the pathway to approval ...") (30)

4. Streamlining the Approvals Process:  
The Search for Solutions

For some time, the Ministry of the Environment has been concerned about problems inherent in the various approvals requirements of the Province and has been committed, with other Ministries, to seeking actively the rationalization of the approvals process.

Within the Ministry of the Environment, for example, all approvals functions have been brought together into a single Environmental Approvals Branch, to streamline the process for applicants by providing "one-stop shopping" for environmental approvals. By this means, the possibility of inconsistent decisions is avoided and overlap is minimized. The Ministry's legislation has also been designed to avoid overlapping hearings being required. For example, where

hearings would be required for the same undertaking under both The Environmental Assessment Act and The Environmental Protection Act or Water Resources Act, those under the latter Acts are waived.

The Ministry of the Environment has been an active and willing participant in various Government attempts to streamline the approvals process. Examples of such involvement include the Ministry's assistance in the preparation of the Robinson Report on The Expropriations Act (see page 69), its work on the review of requirements for mineral aggregate operations, its submissions to The Planning Act Review Committee and response to its Report, and its participation in the Interministerial Committee on Streamlining the Approvals Process for Waste Disposal Sites.

#### 5. Proposals for Streamlining the Approvals Process

Bearing in mind the previous discussion in this paper on "lead time", the Ministry wishes to help "grease the wheels" of the main regulatory mechanisms to which Ontario Hydro is subject. With this objective, the following measures for streamlining the relationship between The Environmental Assessment Act, The Planning Act and The Expropriations Act are put forward.

i) The Environmental Assessment Act and  
The Planning Act

Assuming the present situation that future major Ontario Hydro undertakings are subject to The Environmental Assessment Act (i.e. are not exempt), a problem of potential duplication in application procedures and hearings, as well as potentially conflicting decisions, could arise between The Environmental Assessment Act and The Planning Act. For example, an Ontario Hydro undertaking could be granted approval under The Environmental Assessment Act, but not conform to the restricted area by-law or Official Plan (both passed pursuant to The Planning Act) of the municipality in which it was to be located. A second approval application and possible hearing could take place under The Planning Act, with a decision to deny Hydro the necessary amendments, thereby halting the undertaking.

This type of situation is also of concern to public and to private proponents other than Hydro who are subject to both The Environmental Assessment Act and The Planning Act. The Minister of the Environment and the Minister of Housing have therefore recently jointly agreed to streamlining arrangements for eliminating the duplication of hearings and streamlining approvals under The Planning Act and The Environmental Assessment Act. (31)

Under the arrangements agreed to by the Ministers, where an Ontario Hydro undertaking is subject to The Environmental Assessment Act, any approvals required under

The Planning Act, such as amendments of Official Plans or restricted area by-laws, would be decided upon by the decision-making body under The Environmental Assessment Act. This body would be either the Environmental Assessment Board, the decisions of which are subject to review by Cabinet, or, where no hearing is required by the public, the Minister of the Environment, whose decisions are made with Cabinet approval. Decisions made will stand in place of decisions by the Minister of Housing or the Ontario Municipal Board.

As a result of these streamlining arrangements, a duplicative hearing before the Ontario Municipal Board will not be required for projects that are subject to The Environmental Assessment Act. While the objects of both The Environmental Assessment Act and The Planning Act will be accomplished, Ontario Hydro and concerned citizens will thus be able to focus on one review process and one potential hearing, within a clearly defined process leading to a decision. All matters relevant under either The Environmental Assessment Act or The Planning Act will be addressed in this consolidated process.

To implement these streamlining arrangements, amendments are required to The Planning Act. The Ministers have agreed that consideration will be given to introducing the necessary amendments as soon as possible. The endorsement of these arrangements by the Royal Commission would prove

helpful in ensuring that these amendments are assigned the high priority that, in our opinion, they merit.

ii) The Environmental Assessment Act and  
The Expropriations Act

Assuming again the present situation of Hydro undertakings being subject to The Environmental Assessment Act applied, and assuming that potential overlap with The Planning Act had been resolved by implementing the streamlining arrangements discussed above, an Ontario Hydro undertaking might still run into difficulty if the lands for the approved facility would have to be expropriated. A hearing might then arise before an inquiry officer under The Expropriations Act. Recent court cases involving the Bradley to Milton transmission line make it clear that the inquiry officer has no choice but to hear evidence on matters such as alternatives to the undertaking and alternative methods of carrying out the undertaking which will already have been dealt with under The Environmental Assessment Act.

A solution to this problem already exists in Subsection 3 of Section 6 of The Expropriations Act, which provides that the Lieutenant Governor in Council may, "where he considers it necessary or expedient in the public interest to do so", waive the inquiry procedure. However, Cabinet has historically been very reluctant to exercise this power.

A more palatable solution is found in the recommendations of the Report on The Expropriations Act prepared by R.B. Robinson, Q.C., with respect to the procedures for dealing with massive expropriations. The text of these recommendations and the arguments supporting them is provided in Appendix B. Essentially, Robinson recommends that where there is a full inquiry into the need for an undertaking, its size and location, and alternative sites or routes - such as would take place in any case under The Environmental Assessment Act - the procedures under The Expropriations Act would be limited to determining the need for particular parcels of land for the purpose of the approved project.

Adoption of the Robinson Report recommendations, coupled with full environmental assessment, would avoid repetition of the expropriations problems still being experienced with the Bradley to Milton transmission line.

Implementation of Robinson's recommendations requires amendments to The Expropriations Act. Again, endorsement by the Royal Commission would be of assistance in ensuring that these amendments received priority.

### iii) Conclusions

Implementation of the above solutions would provide the resolution to the jurisdictional overlap of The Environ-

mental Assessment Act, The Planning Act, and The Expropriations Act. None of the issues which citizens can raise under the currently applicable legislation would be foreclosed by the new arrangements. The result would be to consolidate the approvals procedure and remove the causes of delay which presently exist within it without in any way compromising the "three key principles" of flexibility, holism and participation.

6. Federal-Provincial Jurisdiction in Nuclear Energy

A discussion on approvals processes would be incomplete without addressing the question of Federal-Provincial jurisdiction in the field of nuclear energy. In this respect, we note the comments of the Royal Commission in its Interim Report on Nuclear Power in Ontario. Specifically, we note the following comment on page 166:

"However, we also believe that since nuclear development is a provincial undertaking, the Province, should have the responsibility to make the choice to use nuclear power and the decisions concerning its environmental, social and economic costs".

Since Ontario Hydro is a Provincial Crown Corporation, we agree with this statement. Hydro and the province are initiators of a project, and make the basic initial decision that the construction of a nuclear facility at a particular location in the Province is in the best interests of the people of Ontario. The Atomic Energy Control Board (AECB) has as its primary function the regulation of the

construction and operation of that facility in conformity with its regulations.

Since the AECB must also license the construction of a facility at a particular location, it of course behooves the province to make sure that a project, including its location, is likely to receive that Federal approval. There is, therefore, obvious merit in Ontario Hydro discussing with the AECB the various alternatives under consideration, so that when Hydro seeks provincial approval for a project, it will be in a position to show that the project is one which would satisfy the AECB requirements.

Insofar as documentation is concerned, whatever information is required of Ontario Hydro by the AECB upon which to base federal government approval, should also form an integral part of the provincially-required environmental assessment document. It would thus be available to the Ontario Government approvals staff and the interested public. By this means, a complete picture on which to base a provincial decision is built up. Naturally, the reverse also applies: the AECB should receive the information contained in the environmental assessment.

Discussions are currently taking place between Ontario Hydro, the Atomic Energy Control Board and the Ministry of the Environment on this matter with respect to Ontario Hydro's next nuclear generating station. We expect that a procedure for the combined overall process will be agreed upon shortly.



## VII AFTER RCEPP: SUGGESTIONS FOR THE ROAD AHEAD

### 1. Introduction

Throughout its Inquiry, the Royal Commission has sought to place electric power planning in a broader context, both within that of energy planning and that of society as a whole. This view is expressed in such statements as,

"A necessary starting point is the continuing development of a comprehensive provincial energy policy which is open to public discussion." (32)

"Clearly, electrical energy is only one aspect of the total energy picture, and perhaps should be explicitly placed within that context. For example, should there be a regular formal public policy statement on Ontario Hydro operations, within the context of total provincial energy strategy ...?" (33)

In Ontario's Energy Future, the Ministry of Energy discusses the necessity, when planning, of taking into account the various interests in society:

"Because energy inter-relationships run through the whole community, policy planning becomes complex. There is a continuing and growing requirement for co-ordination within the various Ministries of Ontario, among governments and between the public and private sectors.

This co-ordination now exists to a degree but assuring that all policies are effective and that effort by one agency is not prejudiced by action by another is obviously an on-going and continuous process.

Planning in Ontario should be comprehensive and continuous in meeting the requirements of the "near term", the 'transitional phase' and the 'long-term'..." (34)

In previous Submissions to the Royal Commission, the Ministry of the Environment has stated why it is interested in energy planning, and in the long-range planning of Ontario Hydro. (35) The truth is that sound environmental and energy planning are bound up with one another. The results of energy planning entail environmental effects, and planning which is environmentally sensitive invariably also has implications for energy planning, however indirectly. Ontario's Energy Future states,

"The fact is that there are adverse environmental consequences associated with the extraction, transportation, processing and use of all energy forms ...

Environmental considerations must be accorded a high priority in efforts to resolve energy supply problems and with respect to energy use." (36)

The Ministry of the Environment's responsibility for the implementation of The Environmental Assessment Act requires that it take an interest in the policies that apply to electric power planning, by virtue of the requirement for the proponent to consider the "rationale" for undertakings, alternatives to the undertaking, and alternative methods of carrying it out.

In a speech to the Conference on Canadian Nuclear Policy, Dr. Arthur Porter observed,

"... after three years of virtual "total immersion" in electric power planning and particularly the concepts which underpin it, it is clear that energy policy necessitates a holistic approach ... I am convinced that the development of energy policy must be inter-disciplinary in approach. How can energy policy be approached .... without a holistic understanding of the basics?" (37)

It is in this spirit, as one of the participants in the "inter-disciplinary" approach to energy policy development, that we offer the following conceptual framework for placing electrical power planning within the context of overall energy planning, while recognizing the very real difficulties involved in practice of fully implementing such ideas. The conceptual framework is based upon the "three key principles" of flexibility, holism and participation, and the "end-use" and "concurrent multi-level planning" approaches described earlier in this paper. It is apparent that the energy planning framework in Ontario, under the guidance of the Ministry of Energy, has in any case been evolving in the direction of these principles. Perhaps the conceptual framework outlined here will be helpful in furthering this evolution.

## 2. Basic Requirements

We suggest the following requirements as basic for an effective energy planning system:

- i) energy policy must be placed within a social context;
- ii) electrical energy must be placed within the context of general energy policy;

- iii) there must be feedback between the approval and implementation stage of projects, and between these stages and policy development procedures which they reflect;
- iv) a diversity of policy options must be developed and pursued simultaneously, so that at any one time society has more than one option to choose from;
- v) a broad range of environmental factors (including social factors) must be considered in developing and evaluating policy options, at all stages of the planning process;
- vi) all these requirements should reflect the "three key principles" of flexibility, holism and participation.

3. Elements of the Policy Development and Approvals Process

Each major element in the process (the electrical energy program stage, the electrical system program stage, and the project planning stage) would be subject to a process involving:

- Initiation, i.e. a proposal would be put forward for discussion, based upon a comparison and evaluation of alternatives;

- Review, i.e. the proposal would be reviewed;
- Approval, i.e. it would either be approved or rejected.

The major elements we envision would be:

i) General Energy Policy Program

This would involve all of the various components of the total energy picture. Policies with regard to oil, gas and solar energy use, might include, for example, incentives to install solar equipment. Policies regarding the management of end-use or conservation might include, for example, insulation standards. This program would be based upon the analysis of existing and projected future patterns of energy end-use, complemented by a similar analysis of methods of supply. Various scenarios involving differing energy supply and end-use patterns could then be constructed and compared, taking into account broad environmental, financial and technical implications.

ii) Electrical Energy Policy Program

This would be, of course, a component of the general energy policy program. It would set out load figures to be met at various dates in the future, together with general policies regarding the means to be employed to meet those

demands, for example, the proportion of nuclear to fossil generating stations, or the sizes of the generating units. It would be understood that the load figures and the policies regarding technology would be tentative, and subject to revision in the light of new information. (It should be noted that at the same time as this process was operating in the field of electric power planning, similar processes would be used in developing other components of the general energy policy program, e.g. fossil fuels, solar energy).

iii) Electric System Program

This would contain the broad configuration of the systems plan, with general locations of generating stations, transmission lines and other facilities, and their size and type.

iv) Project Planning

This would deal with the actual selection of individual projects, such as generating stations, transmission lines and switching stations. In the interests of keeping options open, other projects should concurrently be passing through the planning process at any given time.

v) "Off-Line" Activities and Processes

Simultaneously, "off-line" activities would be carried out with regard to electric power planning. "Off-line" activities proceed concurrently with, and feed into, the main stream of the planning process. They might be concerned, for instance, with the development of rate-setting and capital-financing policies. These would, of course, also be fed into the initial analyses on which the general energy policy program stage was based. Thus the supply/end-use analyses would take into account financial factors when constructing and evaluating the different scenarios. All these processes would be interlocked and interwoven.

There might well be other off-line processes at the same time to develop policies on specific generic issues. For example, processes to consider how environmental standards would affect various energy technologies, e.g. whether once-through cooling systems met environmental standards; or whether certain technologies, such as advanced nuclear fuel cycles, were acceptable, and so on. The "off-line" activities and processes would continue throughout all stages of the planning process.

4. Conclusion

While, as we have stated, many aspects of the existing framework have evolved to reflect the principles embodied in

the above model, it is clear that work still remains to be done. In identifying such areas and in comparing existing and proposed bodies with the functions outlined above, we once more stress that the Royal Commission should keep in mind the "three key principles" of flexibility, holism and participation, and the ancillary approaches of "end-use" and "concurrent multi-level planning". We would also reiterate that the early policy processes should reflect the same broad environmental factors upon which later projects are approved.

An examination of existing planning and approvals mechanisms will show that the environmental assessment process conforms with the "three key principles" and is compatible with the ancillary approaches. It allows for feedback and a broad range of alternatives to be examined at all stages. This is, of course, hardly surprising since, as noted earlier, it was specifically developed to operate within the context of the changing social environment and to respond to the new planning and decision requirements.

"Constructive tinkering" with the approvals process, on the lines of that described in Section VI of this paper, will also aid in the further evolution of a policy and approvals mechanism for electric power planning.

We hope that the foregoing suggestions will help the Royal Commission in formulating its advice to the government

regarding improvements to electric power planning in the province in the "Post-Porter" phase, when the Commission's labours have been completed.



#### VIII FINAL CONCLUSIONS

1. Present-day society is characterized by a climate of uncertainty, so that long-term planning is difficult. The length of "lead time" required to bring an electric facility into operation is seen by Ontario Hydro as a major problem; in particular, there is uncertainty and conflicting opinion as to what the actual length of such "lead time" will be.
2. In the Ministry of the Environment's view, much of the "uncertainty" of "lead time" may be ascribed to the necessary time required for the determination by the public whether the undertaking has a rational basis in terms of the expected benefits, when compared with "costs" - both to the "human" and "natural" aspects of the environment. Therefore, some of Hydro's current proposals for shortening "lead time" will be perceived as leading to the restriction of public discussion; this is likely to prove counterproductive. However, the Ministry of the Environment is anxious to help with the "streamlining" of appropriate areas of the approvals mechanism.
3. A strategy for dealing with the climate of uncertainty in today's society should incorporate the "three key principles" of flexibility, holism and participation.

The approaches of "end-use" and "concurrent multi-level planning" are ancillary to such a strategy. Feedback and iteration are essential to the process.

4. While it is recognized that many aspects of the existing general energy and electric planning process have already evolved to reflect the principles set out above, a conceptual policy development and approvals framework for electric power planning, incorporating those principles and approaches, is outlined for discussion.
5. It should be noted that the "three key principles" are embodied in The Environmental Assessment Act, while the two ancillary approaches are compatible with it. The Act was specifically developed to operate within the context of a changing social environment and should therefore play a key role in such a strategy.

REFERENCES



1. Galbraith, J.K., The Age of Uncertainty, Boston: Houghton Mifflin and Co., 1977.
2. Emery and Trist, among other theorists of social organization, have described the present environment as a "turbulent field" in which "even the ground is moving". See, for example, Trist, E., "Collaboration in Work Settings: A Personal Perspective", J. Applied Behavioural Sciences, Vol. 13, No. 3, 1977.
3. For an analysis of the rise in environmental concern in several countries, see, Enloe, C., The Politics of Pollution in a Comparative Perspective, New York: McKay, 1975.
4. See, for example, Elder, P. (ed.), Environmental Management and Public Participation, Toronto: The Canadian Environmental Law Association, 1975.
5. The demand for greater public participation in decisions, and the imposition of much new regulatory criteria upon many activities that formerly occurred with a minimum of regulation, are clear indications of this. Economists have not been slow to try to apply economic analysis to such "externalities". See: Kneese, A.V., Ayres, R.U., and d'Arge, R.G., Economics and the Environment: A Materials Balance Approach, Baltimore: Johns Hopkins Press, 1970; Victor, P.A., The Economics of Pollution, Toronto: University of Toronto Press, 1972. For a more radical analysis of the relationship of the economic system to the physical environment see, Georgescu-Roegen, N.R., The Entropy Law and the Economic Process, Cambridge, MA., Harvard University Press, 1971.
6. The Ontario Ministry of Energy, Submission to the RCEPP: Part Two, "Response to Question One", July 1976, p. 23.
7. See, Ontario Hydro, Planning of the Ontario Hydro East System, Part 1, Volume 1 (Report No. 573 SP), June 1, 1976, chapters 4 and 5.
8. The RCEPP Issue Paper No. 8, The Decision-Making Framework and Public Participation, observes:

"The scope of system planning is substantial in both time and space. Generating projects, for example, have a 'lead time' time of 12-15 years and a subsequent useful lifetime of 30 years or more. For the system as a whole - which in the past has had a doubling time of 10 years - Ontario Hydro has at any one time been planning new facilities equivalent to its entire system!

Because of the scale thus indicated, the planning process is a difficult one, as the uncertainties of the long-term economic environment and long-term social priorities have been added to the usual problems of anticipating the rate and direction of technological change. As the size of the system increases, social, economic and environmental impacts are magnified." (p.1)

9. Select Committee of the Legislature Investigating Ontario Hydro, A New Public Policy Direction for Ontario Hydro, (Final Report), June 1976, Chapter III-2.
10. One example of this is the possibility that there may not be enough orders for new equipment to sustain the nuclear industry in Ontario as presently constituted. This is discussed in the Interim Report on Nuclear Power in Ontario of the RCEPP, A Race Against Time, September, 1978, Chapter Eight, pages 130-134.
11. Debate Stage Hearings Transcript 200: 31,544-5.
12. Robert Taylor, Chairman, Ontario Hydro, "Planning the Electric Power System or Snakes and Ladders", address to the RCEPP's Symposia on Ontario's Electric Future, November 19, 1976, Toronto, p.14.
13. Canadian Electrical Association, Lead Times and Approval Processes facing Canadian Electrical Utilities, Submission to the RCEPP, Fall, 1977, p. 15.
14. See the quotation from Robert Taylor on p. 23, infra.
15. Robert Taylor, op. cit., p. 8.
16. ibid, p. 6.
17. ibid, p. 12.
18. To this point we have managed to find three different Orders-in-Council with respect to the Chats Falls property dated June 9, 1925, February 10, 1930 and September 15, 1931. The 1931 Order authorizes the Hydro-Electric Power Commission of Ontario,

"To acquire by purchase, lease or in any other manner, or without the consent of the owners to enter upon, take possession of, expropriate and use, temporarily or permanently, any land, (as defined in the said Power Commission Act as so amended), affected, or which the Commission deem likely to be affected, by such raising or lowering of water levels or the diversion, or as the Commission may deem necessary for the construction, maintenance and operation of dams, fills, sluices, canals, raceways, transmission lines or other works, or for providing storage of water, or for any other purpose in connection with or related to the said development."

It is clear the the purchase of the land at Chats Falls was approved as a site for hydro-electric facility. Interestingly, one clause in the 1931 order states,

"... that the Commission duly applied for approval of the site, plans and mode of construction of such

dams and works insofar as they are situated within Ontario in accordance with the provisions of Section 9 of The Lakes and Rivers Improvement Act, being RSO 1927, Chapter 43, and that the Engineer designated for the purpose by order-in-council dated the 19th day of April 1928 duly examined the plans, documents and other information accompanying said application and recommended the approval of said dams and works."

Here it is clear that the government deemed the property to be an acceptable location for a specific hydro electric facility prior to the transfer of property rights to the Commission.

19. The Orders-in-Council which approved the purchase of the properties at the Lennox, Wesleyville, and Darlington in 1968 and 1976, 1968, and 1971 respectively, were not very specific about the facilities for which the land was being acquired. In the case of Wesleyville and Darlington the Orders simply approved the use of the land for the purposes of The Power Commission Act, RSO 1960, Section 24 and the construction, operation and maintenance of the works thereon. The Lennox and Wesleyville Orders are a little more specific in that they authorize Ontario Hydro,

"to generate and produce power on the said lands by the use of water, coal, steam or oil, or by any other means, and transform, transmit, make available for use, distribute, deliver, sell, supply and generally use for the purposes of the Corporation such power and connect the works constructed or installed for these purposes with any other power works and with any system."

They also authorize Hydro,

"for the purposes of the immediately preceding paragraph (above) to acquire by purchase, lease or otherwise hold, improve and use real and personal property, acquire by purchase or otherwise water, coal, steam, oil and other supplies and construct, maintain and operate works;..."

Nowhere is it apparent in these four Orders for the three properties what the nature of the facilities to be constructed on the properties might be nor is it apparent in the Orders what reviews were done of the properties to determine their acceptability as the locations for particular types of facilities.

20. In Hydro's Report No. 573 SP, (supra note 7), a description of the two-stage approval and public participation concept is given on page 5, Section 11.

21. Ontario Hydro, Provincial Generation Siting Review (August 1978) and Ontario Hydro's Drawing No. SS7-DXR-00314-0004, presented at the November 22, 1978, Generation Working Committee meeting at Brockville, Ontario.
22. Supra note 8, p. 5.
23. Evans, P., Decision-Making Structures and Processes and Electric Power Planning in Ontario, RCEPP Staff Research paper, September, 1977, pp 9-11.
24. RCEPP, "A Race Against Time" Interim Report on Nuclear Power in Ontario, September 1978. See Chapter Ten and related findings and the following two findings related to Chapter Twelve:

"The rationale for a nuclear project should be open to public scrutiny. The Ontario Environmental Assessment Act potentially provides an appropriate basis for public review of the comparative comparative social and environmental implications of nuclear power development."

"The principle of 'openness' of the regulatory process is important. Public participation should increasingly be recognized as an essential component of decision-making on nuclear matters. Concomitantly, access to information should be based on 'disclosure being the rule and exceptions being strictly limited'."

25. Schumacher, E.F., Small is Beautiful (New York: Harper and Row) p. 234.
26. RCEPP Debate Stage Hearings Transcript 149: 19,855-6:

"Mr. Nastich: Well, essentially I see politicians as reflecting the people who elected them. And they must necessarily reflect those interests, and I think they do accurately.

At the same time there are longer term interests of the province which, perhaps, go contrary to the short term interests. And the legislature, I assume, recognized that in certain areas of its operation and set up a mechanism like the Public Corporation in order to carry on the job with a trustee responsibility to look at the short and long term interests (emphasis added).

Now it is necessary that the political leaders must reflect what the people think at any one time. It depends on the intensity of the issue, it seems to me. And in the present scheme, the present system, the decision-making tends to give the best balance that I

can think of, that is it gives the responsibility to a power corporation to consider the long and short term, but leaves it open to the political leaders and the people, essentially, to say while in this case we think that the short term is more important than the long term in spite of your trustee responsibility, we take the responsibility for that decision.

And that's the way I see it, when I say in the short term and the long term, the legislature showed great foresight, it seems to me, in setting up a power corporation such as Ontario Hydro with its responsibility to take care of the long run, recognizing at some point in time, sometime, the short term has to prevail. But that short term decision then has to be the responsibility of the people through the Government."

27. Supra note 21.
28. The Ontario Ministry of the Environment, Green Paper on Environmental Assessment, September 1973.
29. Robert Taylor, op. cit., p. 11.
30. ibid, p. 12.
31. See, EA Update, Vol. III, No. 6, December 1978, pp 1-2 and Appendices I and II.
32. Supra note 24, p. 175.
33. Supra note 8, p. 14.
34. The Ontario Ministry of Energy, Ontario's Energy Future, April 1977, p. 60.
35. See Ontario Ministry of the Environment Submission(s) to The Royal Commission on Electric Power Planning. Preliminary Submission, January 1976, pp 8-9; Public Information Hearings, May 1976, p. 2; Final (Debate Stage) Hearings, June 1977, pp.2-3.
36. Supra note 24, p. 59.
37. Arthur Porter, Keynote Address to the Conference on Canadian Nuclear Policy, held on 8 November 1978.



NOTE: APPENDIX A

Appendix A, the Ministry of the Environment's General Guidelines for the Preparation of Environmental Assessments, has been omitted from this printing. It is available under that title from:

Ontario Government Publications Centre,  
880 Bay Street,  
Toronto, Ontario M7A 1N8

(Price .50¢)



APPENDIX B

Excerpts from the Report on The Expropriations Act  
(Report dated October 1974)





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Ministry of the  
Attorney  
General

Report  
on  
The Expropriations Act

prepared by R. B. Robinson, Q.C.

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October 1974



This report cannot deal with the organizational problem. The necessary experience exists within the Ministry of Government Services, the Ministry of Transportation and Communications, Ontario Hydro and the North Pickering Project of the Ministry of Housing: this experience has shown that with sufficient advance planning, the procedures in The Expropriations Act will work successfully. As to the problem of public relations, a submission received from an owner in North Pickering expresses the viewpoint of 'the victim', in making these comments:

- (i) don't expropriate if this traumatic step can possibly be avoided;
- (ii) have a detailed plan of the scheme;
- (iii) avoid retroactive legislation;
- (iv) move quickly from one procedural step to the next; don't leave the people hanging in the air;
- (v) make settlements public, since the owner will find out anyway. (It is the experience of the writer of this report that what the owner 'finds out' is usually wrong.)
- (vi) make sure settlements are uniform;
- (vii) be humane; employ civil servants who understand that money will not fully compensate for forced loss, and that many people will be very upset;
- (viii) interpret the statute generously, not restrictively;
- (ix) send out simply-worded notices, with a letter of explanation if necessary;
- (x) help the victims relocate;
- (xi) be available for consultation;
- (xii) do not belittle public concern;
- (xiii) welcome the owner's participation in planning.

These are valid points worthy of consideration.

The distinction between the individual and group aspects of expropriation planning under the Act is most troublesome in relation to the inquiry procedure. The inquiry officer, in considering the necessity to expropriate a particular piece of land is dealing with an individual concern. With his consideration of route or site selection, as recommended in this report, the interest of a group is introduced. It is, however, at a much earlier stage that the group would like to become involved; i.e., at the time of the initial decision to undertake a massive, or major, or even significant project. Not surprisingly The Expropriations Act contains no provision for group involvement in the early stages of planning, nor indeed for *any* involvement in policy decisions; the principle contained in the McRuer Report is that the decision to expropriate and what should be expropriated are independent political decisions, made by an authority in a position to accept clear political responsibility — ultimately at the polls. It is significant, however, as stated before, that there is an attempt to invade this field in

## MASSIVE EXPROPRIATIONS

The problems arising from expropriations for massive projects such as new townsites, arise from three main causes.

1. The procedures contained in The Expropriations Act are intricate and complex; the Courts heavily penalize any procedural error because the expropriation process invades private rights. A massive and smooth-running organization must be set up and maintained in operation for several months or even years. It includes a staff of land agents operating in the field in continual contact with the private owners who are losing their land. The agents feel the owners are antagonistic and unco-operative while the owners feel the agents are inept and insensitive; a problem of public relations arises.
2. The Expropriations Act focuses on the acquisition of a single parcel of land: few sections were designed for a multiple acquisition. While compensation is nearly always an individual matter, acquisition procedures usually have a multiple effect.
3. A massive public project raises community and environmental concerns and the present inquiry procedure is not geared to examine them.

virtually all inquiries under section 7(5) through a challenge as to what are the "objectives of the expropriating authority."

The pressures for public involvement in political decisions were not the same in 1968 as they are in 1974 and the changing attitudes will no doubt have to be reflected in the planning of massive projects requiring the exercise of the expropriating power.

The desire for group participation in the planning process, now very strong, relates to community and environmental concerns, such as adjectives being broadly interpreted to include social, economic and cultural conditions. A hydro line affects the rural environment; the freeway splits a community; the new town destroys the old hamlet. In response to the new pressures, the Ministry of the Environment, in September, 1973, published its Green Paper on Environmental Assessment. The first sentence of the Paper reads:

"In recent years, massive new projects such as nuclear power plants, freeways, new towns and international airports have drawn the attention of the public to the need for increased consideration of environmental matters."

Environment in the Green Paper is the human as well as the natural environment. The following comments are made in the Paper:

"present legislation has not provided the means of ensuring that all environmental factors are considered in a comprehensive and co-ordinated fashion, including public input, before major projects and technological developments proceed. It is the intention of the Government to encourage the further development within its planning process, of an environmental conscience."

"A procedure should be developed to bring about an integrated consideration at an early stage of the entire complex of environmental effects which might be generated by a project. Successful implementation of such a procedure is dependent upon the exercise of powers within provincial jurisdiction. Without a strong provincial involvement in this area, society could often be in a situation of reacting to environmental problems which could have been avoided."

"The essence of such a strengthened approach to prevention is not only that it would be far more effective than an unco-ordinated set of approvals procedures but that it would minimize the future need for abatement and restoration. Experience in existing programs has clearly demonstrated that it is more economic to incorporate environmental objectives at the conceptual stage of a project than to provide abatement equipment and restorative efforts as an afterthought."

"With these factors in mind, the Government has indicated its intention to establish a comprehensive system of assessment and evaluation of the environmental significance of activities within both the public and private sectors."

"There are three key elements to the proposal to expand and strengthen the preventive aspect of the Province's environmental

programs. These are embodied in the following three phrases: first, 'integrated consideration,' second, 'at an early stage,' and third, 'of the entire complex of environmental effects which might be generated by a project.'

"Another factor implied in the element of 'integrated consideration' is the need for a commitment to public participation. The perceptions, attitudes and values of members of the public can play an important role in the identification of potential impacts, the assessment of their significance, and the evaluation of the overall advantages and disadvantages, including trade-offs, involved in proceeding with an undertaking."

"A second key element in the statement is that the consideration should take place 'at an early stage.' This is important for a number of reasons. First, it ensures that environmental factors are considered at a time when alternative courses of action, including any measures to mitigate adverse effects, and the alternative of not proceeding, are still available and before actual environmental damage occurs. Second, early assessment would enable positive public contributions at the conceptual planning stage. Last, as indicated above, it is more economical to incorporate environmental safeguards at the conceptual stage."

The manner in which these principles will be carried into legislation is unknown at the time of writing this report, but legislation is expected. It is hoped that the planning of public projects for which land must be expropriated will be influenced by these principles, and may include public involvement and information, early consideration of environmental concerns, measures to reduce adverse effects, and the possibility of not proceeding at all.

If such matters can be considered fully and early, much of the sting of later expropriation can be removed.

Site and route selection should also be treated in the same manner; i.e. early and with public involvement. An argument can be strongly made that it is much too late to raise the question of the location of the project at the expropriation inquiry. By this time the detailed design has been completed at great expense in time, money and effort. The expropriation proceedings cannot begin until such design is finished, because the precise area to be expropriated can only then be finally known.

All matters such as these should be determined prior to giving notice of the intention to expropriate. They are the matters of general public concern, the matters involving the group rather than the individual. Ideally, what should be left for the expropriation inquiry is only those matters which relate to the individual's particular piece of land, such as its exclusion or reduction in relation to the overall scheme.

There have already been a considerable number of projects planned under a policy of public involvement and information. Examples are a provincial park acquired by the Ministry of Government Services, highway developments undertaken by the Ministry of Transportation and Communications, route selection for Ontario Hydro by the Solandt Commission

under The Public Inquiries Act, site selection for the Central York-Pickering sewage project under The Environmental Protection Act, developments during the last two years which have led to Ontario Hydro's principles of acquisition, and urban renewal projects in Toronto.

These are indications of a thrust which will surely continue.

Positive evidence has been brought to this study that where early public involvement and information have been present, land purchases without expropriation have increased in number, and fewer hearings of necessity have been required. As a specific example, certain landowners expropriated for the Central York-Pickering sewage project have shown no desire to request an expropriation inquiry, because of the opportunity they had to participate in the site selection hearings.

It seems apparent that since the inquiry procedure under section 7 is the only statutory opportunity provided to the public to make its views known, much unintended pressure has been focused upon it. For this reason inquiry hearings have become much longer and more complex than was expected in 1968.

It is not suggested that early public involvement is a panacea. Sometimes it will smooth the way to an easier development of the project; on other occasions there will be continual opposition and turmoil. In the final result the political decision will still have to be made by the responsible official; perhaps it will be better informed through public input.

There are two general approaches to the massive project.

1. If the authority chooses to operate without early public participation in the environmental concerns plus site and route selection, it may have to allow several months while the inquiry hearing is confronted with these issues. No reduction can be expected in misconceived or vexatious inquiries. Flow charts will have to be flexible for delay. If this prospect is too formidable, the authority may choose to apply for an order in council dispensing with the inquiry procedure. Such orders have rarely been made to date.
2. Alternatively a process of public involvement can be undertaken. It should be flexible and variable, with every effort made to gain public support. The process should take place well before the design stage of the project. The function of the inquiry under The Expropriations Act should be reduced and confined to individual objections. Although the expected environmental legislation is not known at this time, the Green Paper stresses integration; since some of the issues in the environmental assessment overlap with those in an expropriation inquiry, duplication is to be avoided.

#### RECOMMENDATIONS

*It is recommended that environmental legislation which may be passed pursuant to the Green Paper on Environmental*

*Assessment, contain procedures which will allow consideration of the following matters relevant to expropriation:*

- (a) *the necessity for the project,*
- (b) *the area to be covered by the project, and*
- (c) *alternative sites or routes.*

In the planning of a massive project, the timing of the act of expropriation presents very great problems. With public knowledge of a proposed development, a powerful market force is created. Sometimes speculators will start to assemble land in the area involved, whereby prices escalate; sometimes, on the other hand, the free market in land is eliminated and owners wishing to sell complain that they cannot find a purchaser. It is for these reasons that secretive, unannounced expropriations seemed justified some years ago.

In order to control these market tendencies, public authorities may be compelled to undertake the necessary expropriations as early as possible in the planning process. There are other advantages. The expropriation fixes the date of evaluation, and uniform prices can be paid. For those owners choosing to sell immediately, there is legal authority to pay the benefits under The Expropriations Act, such as the residential allowance and relocation costs. Since the expropriating authority will have gained title to the land, the offer and tender of payment under section 25 can safely be made. An owner who has received the tender of 100% of the authority's valuation can invest it and protect himself against increases in real estate values while deliberations continue. If agreement cannot be reached, the statutory negotiation and arbitration procedures are available. If land is acquired by expropriation, the abandonment procedure is available should the project be discontinued; it is not available if the land is sold by the owner to the authority.

These are powerful reasons for an expropriation at an early stage of planning; they prevailed in the case of the North Pickering Project.

There are also two serious countervailing considerations. In the first place, an early expropriation will be based merely on a concept, rather than a fully developed scheme. Second, while planning is in the conceptual stage, it is difficult to know precisely what lands are to be expropriated. Both of these difficulties negate a meaningful inquiry hearing; without details of the project, including exact knowledge of its size and boundaries, it is impossible to determine whether the taking of a particular parcel of land is necessary for the objectives of the authority. Put simply, the very objectives have not been developed.

It was the dilemma produced by these difficulties that led to an order dispensing with the inquiry procedure for the North Pickering project.

A further matter of concern to the government arises from the fact that an authority's project normally involves continued public ownership of the land expropriated. This is not the situation in projects of urban renewal or the development of new towns, where most of the land returns to private

ownership. The abandonment and sale provisions of the Act will have to be clarified in relation to such projects.

Consideration has been given to a possible new procedure for massive expropriations which would employ a designation plan of the area, (similar to the designation of land for a King's Highway under The Public Transportation and Highway Improvement Act). Such a procedure would involve the following steps, briefly described.

- (i) A conceptual plan for the project is adopted.
- (ii) A designation plan for the land included in the concept is registered in the Land Registry Office. The plan freezes the land in its existing uses and prohibits building.
- (iii) A hearing of inquiry into the project is held whether under environmental legislation or otherwise, dealing *inter alia* with the necessity for the project, its size and location, and alternative sites (or routes).
- (iv) If the decision is made to proceed, a certificate of approval of the expropriation is given without an inquiry under The Expropriations Act at this stage, and the necessary land is expropriated. Compensation is unaffected by knowledge of the project, through the application of section 14(4) (b).
- (v) The design of the project is completed and prior to giving notice of possession the statutory inquiry is held, limited to matters affecting the individual parcel. Any necessary abandonments are made under section 42.

The advantage of this procedure is that the public inquiry precedes the expropriation, while at the same time land speculation would be discouraged by the designation plan. However, the public hearing might be extremely lengthy and the freezing of the land for a prolonged period, without expropriation, would inevitably be unsettling for the private owners; for this reason, the procedure above outlined is not recommended.

The conclusion reached by this study is threefold:

1. expropriation should be allowed at an early stage in the planning process because of the very great advantages outlined on page 12;
2. the authority undertaking the development should be permitted to approve and complete the expropriation of the necessary land on the basis of a planning concept instead of a completed design; but
3. this procedure should only be allowed where a public inquiry into the project is instituted at the same time.

#### RECOMMENDATIONS

*It is therefore recommended that an alternative expropriation procedure be made available for authorities under-*

*taking large public projects requiring extensive and lengthy planning.*

1. A conceptual plan for the project will initially be adopted.
2. A public hearing of inquiry into the project will be held, whether under environmental legislation or otherwise, which may deal *inter alia*, with the necessity for the project, its size and location, and alternative sites (or routes).
3. At any time after the adoption of the conceptual plan, a certificate of approval of the expropriation of land within the boundaries of the conceptual plan may be given without the inquiry procedure under section 7 and therefore without the necessity of an order under section 6(3) dispensing with the inquiry procedure. Expropriation will take place by the registration of a plan or notice under section 9. Compensation will be unaffected by the project, through the application of section 14(4)(b).
4. Expropriated owners will receive the notices, offers and appraisal report provided for in the Act. No notice of possession, however, will be served until the owners are given the opportunity of requesting an inquiry under section 7 which will be limited to a consideration of the necessity of particular parcels for the purposes of the project. Notice offering such an inquiry will be based on the fully-developed scheme.
5. The abandonment and disposal provisions of the statute will apply to lands not needed for use under the completed scheme.

This procedure would provide a planning concept as the basis for public hearings and for early expropriation, but possession of the land could not be taken until the concept had matured into a fully-developed scheme and the owners had been offered an inquiry similar to that under section 7(b). It is expected that the latter inquiry would rarely be needed, or at least would be shortened, because of the opportunity for public participation in the earlier hearings.



